



# Sacnews

Volume 26 Issue 5

June 2002

## SAC Officers

President: David Fredericksen  
623-979-0513  
david.fredericksen@gmail.com

Vice President: Diane Hope  
602-431-6959  
di.hope@asu.edu

Treasurer:  
Paul Dickson  
sac-treasurer@pobox.com

Secretary: A. J. Crayon  
602-938-3277  
Acrayon@mindspring.com

Properties: Rich Walker  
rhwalker@mindspring.com  
623-780-1386

Public Events:  
Adam Sunshine  
623-780-1386  
Asunshine@mindspring.com

Deep Sky Group: A. J. Crayon  
602-938-3277

Acrayon@mindspring.com

SACNEWS Editor:  
Rick Tejera, 623-572-0713  
SaguaroAstro@aol.com

ATM Subgroup : Thad Robosson  
602-527-0455

Starstarcraacker@qwest.net

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## In Memoriam Curtis L. Taylor February 24 1944 - May 9, 2002



The Saguaro Astronomy club recently lost good friend and long time member Curt Taylor. Curt passed away in his sleep May 9th.

Curt grew up in Kansas, where as a boy he helped his father run the local movie house. It seems that he payed most attention to the cartoons as he seemed to every Bugs Bunny cartoon ever made! He graduated from Kansas State University and worked for McDonnell Douglas and the U.S. Government. At the time of his passing he was working as a civilian for Luke AFB. He was a member of the McDonnell Douglas Astronomy Club during his time there in St. Louis.

Curt was a Member of SAC since 1982, were he met Steve Oe at Fessler's Ranch at what is now Anthem. The two became fast friends and spent many nights at Steve's observatory viewing the planets & the moon. Curt's passion in astronomy was lunar & planetary observing. You could always find him at public events showing them off to the public, especially his favorite, Saturn.

Curt will be deeply missed and our deepest sympathies go to his family.

# The 2002 All-Arizona Messier Marathon

## By A.J. Crayon

While this year's event, with 107 possible, wasn't expected to be as well attended as last year with all 110 possible - there was still a surprisingly large turnout. No doubt due to weather and Tom Polakis' timely email posting of Saturday's great weather report. Most came just to observe and visit, but there was the die-hard group of Marathoners that weren't to be denied.

Thanks to Jennifer Keller and Jack Jones for canvassing the site between sunset and twilight. They counted 66 vehicles, 75 telescope and 84 people; including Dave Ingram from the Boeing Astronomers in Seattle Washington and Mark Blackford from the Astronomical Society of New South Wales in Sydney, Australia. Dave made the trip just for the marathon but Mark happened to be in Arizona and learned about the Marathon from the web.

Before twilight everyone was treated to a very slim sliver of a 1.6 day old moon. But, nearer to twilight many marathoners were already on their way finding the brighter entries.

Several observers spent some time with Hazel Lawler and her new 4.7 inch (120mm) f5 refractor - one of the two smallest telescopes. This surprising instrument, with RA and Declination controls, showed very nice star images to the very edge of the field of view. In fact Hazel used this instrument, rather than her 20-inch (500mm), for the marathon!

Speaking of ladies please note there have been a number of them participating in the Marathon over the years, three for this event, and they have been finding more and more each year. So far the SEDS site (<http://www.seds.org/messier/xtra/marathon/hall.html>) doesn't show an individual lady finding all 110 in a marathon. Who will be the first? I can't wait to congratulate her!

The other 120mm refractor belonged to Matt Luttinen, his first marathon but not his first telescope. That goes back to his Edmund 4.25 inch, to which he named "Palomar, Jr." Finding 75 objects is a great start!

Although there wasn't the all night chirping marking bird as in last year's marathon, there were some interesting side distractions. At one time, the dull rushing sound of absolute quietness was interrupted by an automobile alarm sounding off, startling some of us at first but then

the humor sank in and there were some muffled laughs. Quickly followed by silence as observers got back to the task at hand.

We also kept an eye out for some late night four wheelers exploring the wonders of the Sonoran Desert as we enjoyed the celestial treats above. Hope they had just as good a time.

This was the first marathon Rick Scott used his 9.8 inch (250mm) Lurie-Houghton, a telescope with all-spherical surfaces and a 2-element corrector lens, at the front of the tube, to adjust for coma and spherical aberrations. This design is excellent for astrophotography and wide field viewing. All who viewed this intriguing instrument would agree the viewing was excellent; now Rick has to decide about the astrophotography?

As twilight approached the marathon was once again interrupted - by Ikeya-Zhang! The comet is still beautiful, no matter how it was observed - naked eye, binoculars or telescope. It bluish tint was seen in all optical instruments regardless of size.

The final results appears in table form; but suffice it to say that 107 objects netted first place for eight observers; three found 105 and was good enough for second and one got 104. Looks like 11 got between fifty and 102 and that gets them a certificate. Three were brave enough to turn in lists with less than 50 objects found. Congratulations to all, especially the three!

I managed 52 objects in my 14.5 inch (370mm) Dobsonian, mainly because of taking my time on many of the Messier showpiece objects in order for detail observations and drawings to be completed. Near twilight Steve Coe came over and found Snyder-Murakami. The biggest feat here was Steve Coe's ability to find this very, very faint comet - a challenge even in the 14.5 inch.

This was the first Marathon with two members from Sun City West Astronomy Club; namely Darrin Strosnider (104) and Al Stiewing (53).

There were a number of observers, myself Steve Coe and Matt Luttinen and about 20 other vehicles that showed up for a Friday night session. It was enjoyable, but the skies for the Marathon were considerable better!

## 2002 All Arizona Messier Marathon Results

### Arizona City, April 13th, 2002

NUM	NAME	SCOPE	ORGAN.	MISSED
107	Bob Birket	GPS11	EVAC	33 74 77
107	Jim & Delia Brix	16"Dob	TAAA	33 74 77
107	Steve Dodder	C8	SAC	33 74 77
107	Michael Evans	C8	EVAC	33 74 77
107	Tom Mozdzen	14.5" Dob	EVAC	33 74 77
107	Rick Scott	9.8" LH	EVAC	33 74 77
107	Ken Sikes	10" LX50	N/A	33 74 77
107	Don Wrigley	12.5"DOB	EVAC	33 74 77
105	Mark Blackford	15X80 Binocs	ASNSW	33 74 77 76 40
105	Wade Holguin	LX200	N/A	33 74 77 76 110
105	Brian Page	9.25" SCT	EVAC	33 74 77 76 34
104	Darrin Strosnider	10" SCT	SSWAC	33 74 77 31 32 110
102	Jim Gutman	unk	EVAC	33 74 77 15 2 72 73 30
96	Howard Israel	unk	EVAC	
92	Jennifer Keller	10" DOB	SAC	
82	Steve Coe	8X42 binos	SAC	
75	Matt Luttinen	120mm ref	SAC	
64	Dean Newton	6" Newt	EVAC	
55	AJ Crayon	14.5" DOB	SAC	
53	Hazel Lawler	4.7" ref	TAAA	
53	Al Stiewing	C8	SSWAC	
52	Joan McGue	8" Dob	SAC	
50	Jack Jones	14.5" Newt	SAC	
41	John Doll	10" DOB	SAC	
21	Mary Keller	Mom's scope	SAC	
13	Beth Holguin	20X80 binos	N/A	
unk	*Dave Ingram	unk	WA	

ASNSW = Astronomical Society of New South Wales; Sydney, Australia

LH = Lurie-Houghton

SSWAC = Sun City West Astronomy Club

WA = Boeing Astronomers, Seattle Washington specifically came here for the MM!

\* check-off list not received.

# Fuzzy Spot, Ursa Major

## By Ken Reeves

Ah, Ursa Major, known to most as the Big Dipper. It was most likely the first constellation you learned as a child, and probably the most prominent star pattern in the northern skies (the Big Dipper is actually an asterism within Ursa Major).

For some reason, Ursa Major is my favorite constellation of the springtime galaxy rich sky. This constellation is the 3rd largest in the sky, and has 7 Messier objects. As in the previous columns, I am going to focus on the Messier objects. With the exception of NGC 3587 (M-97), all of the objects described here are galaxies.

NGC 3031 (09 55.6 +69 04): M-81, along with M-82, are real showpieces. In the 10" scope it is very large, very bright, has a much brighter middle, which suddenly brightens to a non-stellar nucleus. Using averted vision makes the halo extend quite a bit, especially in the minor axis. 2 stars are involved to SE. Some possible mottling is suspected, but mostly seen as very even. In the 20" scope, it is very bright, very large, and has an elongated halo 5:1 NE/SW. The halo gradually and smoothly brightens to a brighter middle elongated about 2:1 the same orientation as the halo, and then suddenly there is a much brighter non-stellar nucleus. Averted vision may show a clockwise spiral structure, especially on the SE side. 2 stars are involved on the SW end.

NGC 3034 (09 55.8 +69 41): M-82, in the 10" scope, this is seen as pretty bright, fairly large, extremely elongated ENE/WSW, with no central brightening, and very mottled. There are possible dark notches at the middle. A fainter halo surrounds the main central streak. There is a nice string of 3 stars leading away from the galaxy to the SW, and several other stars close by. In the 20" scope, M-82 is bright, pretty large, elongated about 6:1 WNW/ESE, extremely mottled, and contains no real center or nucleus. There are two brighter patches near the middle separated by a dark lane. Averted vision extends the halo and shows tapered ends. There are several stars nearby, but none are involved. This is a very nice streak of light in the sky. (Note the different orientation designations. With objects near the pole, it is hard to tell the orientation since the drift is so small. The correct orientation based on the Digital Sky Survey is ENE/WSW.)

NGC 3556 (11 11.5 +55 40): M-108, in the 10" scope, it is very bright, very elongated WNW/ESE, pretty large, has a very bright middle, and a stellar nucleus. The halo is pretty bright, but shows no mottling. Using averted vision makes it stand out somewhat. Upping the power to 140X, there is a very definite stellar nucleus and perhaps some mottling. In the 20" scope, it is very large, pretty bright, and very slightly brighter in the middle with a very bright

elongated about 5:1 E/W with the halo being extremely mottled, especially with averted vision. Suspected are 2 or 3 involved stars. Wow!

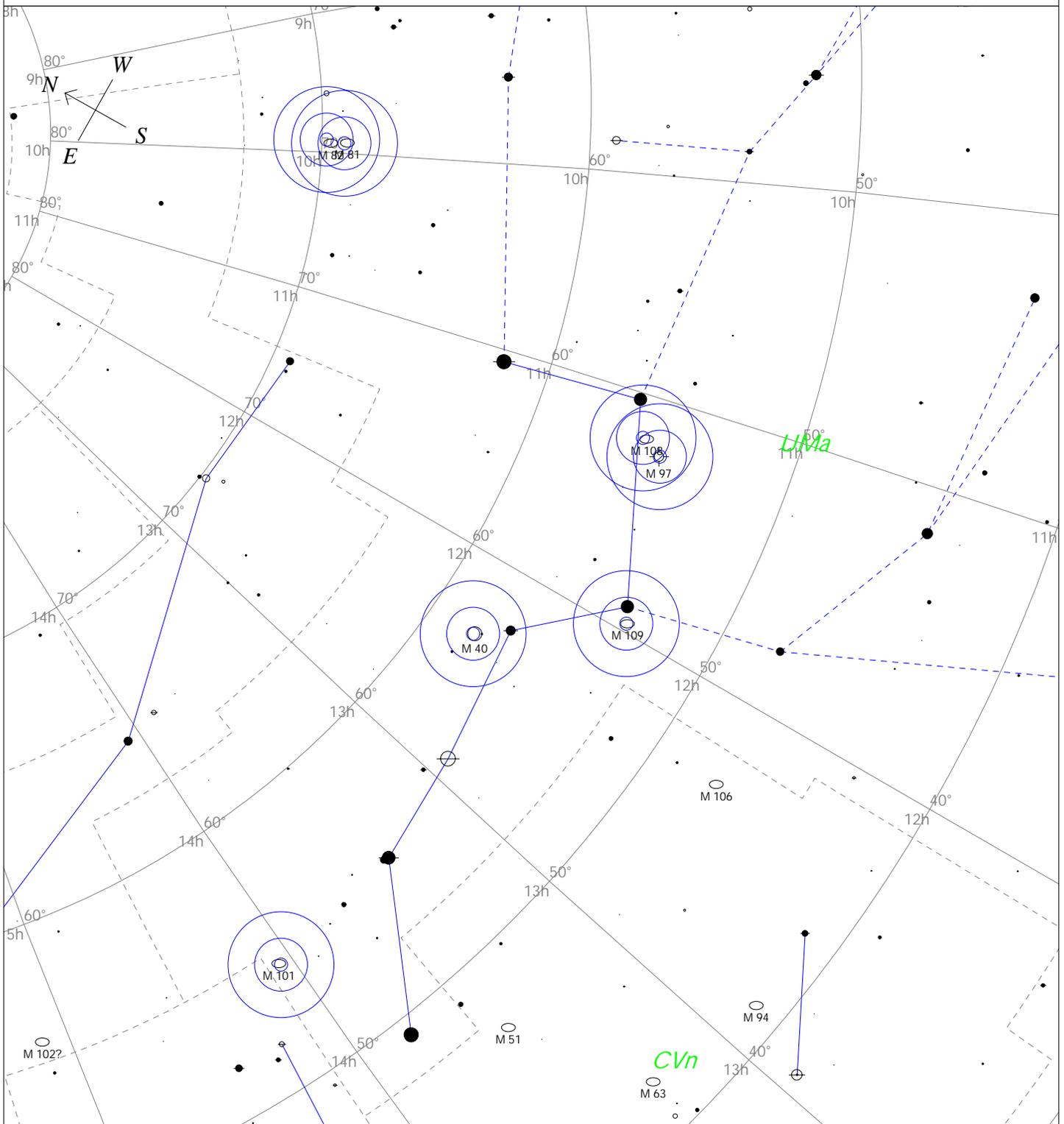
NGC 3587 (11 14.8 +55 01): M-97 is better known as the Owl Nebula. In the 10" scope, it is very round (I don't know how you get rounder than round, but this object apparently is!), has a bright star to N side, and the dark spots suspected. Using the UHC filter brings the object out and does bring out the eyes. This object is very large for a planetary. In the 20" scope, it is pretty large, pretty bright, round, and gray in color. Dark spots suspected with and the central star is occasionally seen with averted vision. The dark spots are oriented WNW/ESE with ESE spot being most prominent. The edge fades out evenly.

NGC 3992 (11 57.6 +53 22): In the 10" scope, M-109 is somewhat bright, elongated, with a bright middle, a non-stellar nucleus, and a star involved near the center. Averted vision makes the halo grow a little. Increasing the power to 100X, there is a definite bright middle, and the halo extends between ends (this ranks right up there with very round as my most unusual note). The elongation is E/W. Using averted vision makes the star near the center really pop out. In the 20" scope, it is somewhat bright, pretty large, containing a halo that is somewhat faint and mottled. The middle is slightly brighter with a faint sub-stellar nucleus. The object is elongated about 3:1 E/W, using averted vision makes it less elongated.

NGC 5457 (14 03.3 +54 22): In the 10" scope, M-101 is very, very large, pretty bright, has a fairly bright halo and a nice sharp center. There is a definite clockwise spiral structure including some knots seen with averted vision. At 100X, a bright non-stellar nucleus is seen along with 2 knots to SW and one to SE. Seen in the 20" scope, stupendous!!! It fills the full field of view. Very, very large, a little bright, contains a round middle that is only slightly brighter than the halo, which gradually brightens up to a non-stellar nucleus. A bright star is involved to the NW of the middle situated nicely between spiral arms. Several other stars are involved further out. The spiral arms are almost indescribable! At least 7 or 8 nebulous patches are visible. The clockwise spiral arms are obvious with 2 main arms and many segments.

Winnecke-4 (12 21.9 +58 06): M-40 is perhaps the most peculiar of the Messier objects. In the 10" scope, it is a wide pair of stars, white and slightly red, kind of hard to tell with the seeing. The white star is the brighter of the two. Not surprisingly, it isn't much different in the 20" scope. It is seen as 2 fairly bright equal stars oriented ENE/WSW. The E star is bluish and the W star is yellowish.

# Fuzzy Spot Ursa Major



## STARS

- <1
- 2
- 3
- 4
- 5

## SYMBOLS

- |                 |                    |                |
|-----------------|--------------------|----------------|
| ● Multiple star | ⊠ Dark nebula      | △ Radio source |
| ○ Variable star | ⊕ Globular cluster | × X-ray source |
| ☄ Comet         | ○ Open cluster     | ○ Other object |
| ○ Galaxy        | ⊙ Planetary nebula |                |
| □ Bright nebula | ⊗ Quasar           |                |

# A Story Above Your Heads

## Mercury

By Mark Klosinski

Mercury, being closest to the sun is the most elusive of all the classical planets. Never straying far from the sun, only rarely does it present itself to those of us here on earth. It also hurriedly orbits the sun by making one of its years in 88 earth days. Only twice this year, during February and June, was Mercury prime for viewing. Even though on October 6<sup>th</sup>, Mercury is at its greatest western elongation, it is still not very suitable for viewing.

Mercury has its origin back in Ancient Babylonian times where it was known as Nabu, god of wisdom and caretaker of the scribes. To the Greeks, he is known as Hermes. It is the Romans that gave it the name that we recognize today, Mercury. We even recognize Mercury with one of the days of the week, but the Norsemen had the final say in the naming of that day. Woden, as in Woden's Day, was the god in Norse mythology that had similar characteristics as Mercury of Rome.

Mercury's responsibilities as a god transformed with time. Originally, he was responsible for the welfare of the animal kingdom, and as the number of cattle one had at the time represented wealth, Mercury was responsible for wealth. As people began to explore the world around them commerce and trade increased. Soon, the best way to accumulate wealth was not by the cattle you possessed, but by your ability to trade with other civilizations. Mercury the god of wealth had his responsibilities expanded to include trade and providing safe passage for those that participated in it. One aspect of being a good trader is the ability to talk the seller into giving you the best deal, so Mercury was also the god of oratory skills.

With the duties of being the god of oratory skills, and being fleet of foot, making one trip around the sun god Apollo in 88 days. Mercury was also given the responsibilities of messenger of the gods. Mercury was responsible for delivering the wishes of the gods to mortal man.

Mercury was a cunning fellow the day he was born. He was born at night in a cave on Mount Cyllene. Only a few days after he was born Mercury plotted to steal some of his brother's cattle. His brother was the Sun god, Apollo. To conceal the traces of his deed, Mercury tied brooms to the hoofs of the cattle and made them walk backwards into a cave. The crime would have been the perfect crime had it not been observed by a mere mortal. The mortal informed Apollo of this dastardly deed. Furious, Apollo immediately sought out his brother to present him to the court of Zeus.

Upon presenting his younger brother Mercury to Zeus, the king of the gods, Mercury began to play a tune on a lyre he had just made that morning. The lyre was made of a tortoise shell and strings. When Mercury began playing it for Zeus and Apollo, they were amused and pleased by his musical talents.

Apollo and his brother Mercury, made peace, and continue as of this day to be the best of friends.

### References:

Manual of Mythology by Alexander S. Murray  
Beyond the Blue Horizon by E. C. Krupp  
Astronomical Calendar 2000 by Guy Ottewell

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# June 2002

SUN	MON	TUE	WED	THU	FRI	SAT
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

## Schedule of Events for June 2002

June 1st	SAC Star Party at Cherry Road, Sunset 1936 Ast, Twilight 2116, Moonrise 0100
June 3rd	Moon at last quarter at 0005 mst.
June 4th	G.D. Cassini Born in 1625. As director of the Paris Observatory, he discovered 4 of Saturn's moon as well as the main division in the rings, which now bears his name.
June 10th	Moon is new at 2340 mst.
June 10th	Annular Solar Eclipse of the sun, From Phoenix it will be a partial event, with a greatest eclipse of 0.721. The eclipse begins at 1719, Max eclipse occurs at 1823 and the eclipse ends at 1921
June 18th	Moon at first quarter at 0029
June 21st	Summer Solstice at 1324 mst.
June 21st	SAC General Meeting at Grand Canyon University at 1930
June 24th	Moon at first quarter at 2142
June 27th	Deep Sky Group meeting at the McGrath's house.

## Future Planning

August 31st	The To Hell with the Monsoon Star Party at Cherry Rd.
Sept-TBA	Northern Arizona Star Party at Mingus Mountain

## Seeing Double

By Thad Robosson

The Twin Points Observatory has progressed quite nicely. This is a good thing given the heat about to come our way. To date, I have 4 walls with siding, paint, a ventilation fan, a door, electricity, and of course a pier and mount set up. The roll-off roof is partially complete, and should be done by June. Afterwards, I only have the interior to finish off. First light occurred on May 4<sup>th</sup>,

and an encore performance took place on May 11<sup>th</sup>. I am extremely pleased with the results. I managed to do a couple rounds of drift alignment, but will go back and do some more when the wind and seeing are more agreeable to such tasks. And how sweet it is to be able to just turn off the power, head to bed, and not have to

(Continued on page 9)



The base for the pier. The hole is 3'x3' by 2' deep, and took 1680 pounds of concrete to fill. Took about 2 hours to mix and pour by myself.



The floor frame. Joists are 1' on center, except around the pier. It rests on the cinderblock "caps" bought at Lowe's. Under suggestion, I went and drove rebar into the ground and hooked them to the frame. This was one of the "just in case" things, but better to do it and not need it.



The pier setting up with the J-bolts installed. Took 4 bags and a little to fill the tube to the top. The 2x4 frame up top is for two reasons...to "squish" the tube to 11" in a N-S line to allow room for Zenith viewing, and to provide a platform to hold the J-bolt jig set up. Other than some minor cosmetic issues, it worked like a charm, and I nailed the N/S alignment; with more than enough room for adjustment either direction.



Form tube has been removed, base plate installed, floor laid down, and 2 walls framed. The back wall had the siding installed and painted prior to installation because there's only about 8" between the block wall and the building. The floor is much steadier than I anticipated, and is completely isolated from the pier.



Mount installed on base plate, all 4 walls are up, sided and painted. The hole is for an attic ventilation fan to help maintain ambient temperature during the summer while the roof is closed. It operates on a thermostat so it won't run constantly until it gets hot.



Close up of the rollers and track for the roof. I used garage door rollers and track. The rollers are nylon with ball bearings. I don't have the full roof weight yet, but with 10 rollers total at several hundred pounds capacity each, I don't anticipate any problems.



The outlet on the right is for a future computer to be placed in the observatory. The 2 outlets on the left are hooked to the dimmer switches for optimum adjustment of the red lighting which will be plugged in to them. I ended up enlisting the help of a family member to troubleshoot the wiring, which kept tripping the GFI at first. It turned out to be a faulty connection, and not a design issue. There is also a non-dimmed outlet at the base of the pier to plug the 'scope into.

(Continued from page 8)

pick it all up in the morning. My wife tells me that I'm acting like a kid, and for the most part, I feel like one. I mean, how often does a kid get to build his own toys?

This month, allow me to give a photographic tour of what's been accomplished. Next month's article should have the roof in place and the inside being finished off.

## Bits & Pisces

### Minutes of the April 26th Board Meeting

#### By A.J Crayon

Opened by president David Fredericksen with Paul Dickson, Joe Goss, Rick Tejera and Thad Robosson in attendance. During the meeting Jack Jones, Steve Coe, Peggy Kain and Glenn Nishimoto came in.

Paul Dickson raised a constitutional topic about a \$100.00 limit for club purchases and the intent was for real estate and not other types of expenses. To change the wording and amount will require a change in the constitution that will require the club membership to be notified and to be voted upon. Paul volunteered to draft the change and submit to club for a vote.

A discussion about the club purchasing new Star Party signs from a company that attended the 2002 All Arizona Messier Marathon was next. The signs are made of PVC and cost \$100.00 for three. Despite the fact they are lighted with LED's it was decided that the signs and lights currently used are sufficient and that purchases of this type are not necessary at this time.

AJ requested a \$50.00 budget to purchase a special observing award for Steve Coe to recognize his observing all deep sky entries in all three volumes of Burnham's Celestial Handbook down to -40 degrees declination. The budget was approved.

Rick Tejera announced the current issue of the newsletter covered the months of April and May, making it larger than normal. The plan now is to get the newsletter ready for the beginning of each month, starting in June.

Paul Dickson announced that members ordering new nametags would also be charged for postage so the

manufacturer, Name Plate, would mail directly from their offices. This will take care of having to carry about a bag full of unclaimed tags.

It was suggested and approved that items in the Schwaar and Holmquist inventory be put up for purchase at a club swap meet, auctioned to club members and or taken to Riverside Telescope Makers Conference in order to fund the scholarship and grants committee budget. The swap meet and auction will be planned for the June SAC meeting.

The funding for the scholarships and grants will be put in a separate account for that usage.

Paul Dickson now has full control of the treasury and announced there was \$2758 in the checking account and \$2352 in savings.

Paul also announced a misprint in the constitution that stated, "...members 65 and over can have their dues reduced by 50." It should state, "...members 65 and over can have their dues reduced by 50% upon request." This, also, will require a change in the constitution; which Paul said he would resolve.

Jack Jones discussed club T-shirts and agreed to have about three designs available for the club to vote on.

Thad Robosson volunteered his new house for this year's Christmas Party. After this discussion the Board Meeting was adjourned.

## From the Editor

Over the past few months, we've had a few issue on distribution of SACnews. I believe these have finally been resolved. Paul Dickson and I have gone over the membership records (Paul more so than I) and have the club roster as up to date as possible. To streamline notification of the electronic version of SACnews, Paul has subscribed all members wishing electronic distribution to [SAC-Announce@freelists.org](mailto:SAC-Announce@freelists.org). This list is low volume, typically seeing about 4 message per month, mostly meeting and star party reminders. Each month I'll post an announcement with the URL of the

electronic edition to this list. If you miss the announcement or are looking for a back issue, you can get the issue you're looking for by using the following naming convention:

<http://www.saguaroastro.org/sacnews/snmmyy.pdf>

Where the "mm" is the month and "yy" is the year of the issue you're looking for. This convention began in 2002. All previous issues I've edited are available from me by request. Issues prior to that are available on CD from Paul, contact him for more information.

## Bits & Pisces

### Minutes of the April 26th, 2002 General Meeting

By A.J. Crayon

David Fredericksen opened the meeting and requested visitors to stand and introduce themselves.

Paul Dickson gave the treasurer's report listing \$2758 in checking and \$2352 in savings. He also brought up two necessary wording changes for our constitution. The first is to change the following wording, "...members 65 and over can have their dues reduced by 50" to "...members 65 and over can have their dues reduced by 50% upon request."

The second is to change the wording on limit of purchases requiring club approval and the dollar amount. Currently the limit is \$100.00 for real estate, which SAC doesn't own. The change is to make the dollar amount \$200.00, remove reference to real estate and to have club approval except for unforeseen circumstances in which case majority approval by the board.

These two changes will be brought before the club at our next meeting for a vote.

Peggy Kain distributed a list of sales purchased from the Holmquist inventory. Announced a new checking account was opened for the Scholarships and Grant with about \$1000.00, an organizational meeting will be announced on about one month.

In order to convert the inventories to cash a swap meeting an auction has been proposed for the next meeting although some will be taken to the Riverside Telescope Makers Conference to be sold there.

Jack Jones will be working to produce a list of items belonging to the Schwaar inventory.

Peggy also announced that purchases of the SAC CD netted \$100.00 for the S&G account.

Steve Coe announced the SAC CD could be purchased for \$5.00 and the monies would be turned over to the S&G account. The CD contains version 7.2 of the SAC database, astro-photographs taken by club members and a program called Astrobyte.

There will also be a novice group meeting at the next star party at Cherry Rd whose topic will be piggyback astrophotography.

Rick Tejera said the newsletter was on its way to Bob Erdmann for distribution and that it will include both April and May in one larger than normal issue. With this event it was his hope to get the distribution back to the beginning of the month for June in its normal size.

AJ Crayon told the audience the next Deep Sky meeting would be a discussion of planetary nebula, led by Chris Schur, and would include many of his very excellent photographs.

Next was the presentation of awards for the 2002 All Arizona Messier Marathon; the results of which are posted on page 2. For a complete rundown on this years Marathons and marathoning in general go the Seds Marathon web site at:

<http://www.seds.org/messier/xtra/marathon/results.html>

A suggestion was made, and accepted by AJ, to include honorable mention certificates for the two members that found less than 50 objects.

Adam Sunshine and Joe Goss held a star party for Girl Scouts.

Our annual Thunderbird Park Star Party is scheduled for Saturday, May 18 and has been advertised in Glendale. A large turnout by the public is expected and we would suggest everyone make a big effort at showing up to help make this a success.

David Fredericksen noted some astronomical changes going on at the north end of Lake Pleasant. There is an observatory, with a roll off roof, for a 12 1/2" telescope, five concrete pads with electrical hook-ups; both of which may be used for public star parties. The only hitch is the admission charged by Maricopa County: \$5.00 per vehicle.

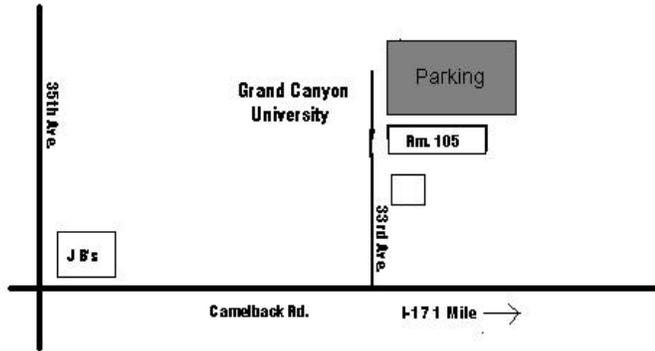
Tom Polakis, whose slides included plumes from a rocket launch and comet started show-n-Tell. Chris Schur showed more of his CCD slides that included comets, galaxies, planetary nebula and a photographic aurora.

At this time we took a 10-minute break after which Diane Hope introduced the evenings speaker, Brian Skiff of Lowell Observatory. His topic was an extemporaneous impromptu using Chris Schur slides. Great Job! Both of them!

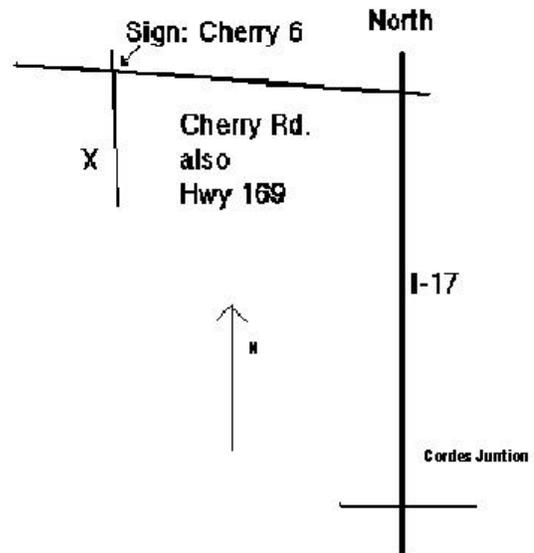
## SAC Meeting and Observing Sites

### General Meetings

7:30 p.m. at Grand Canyon University, Fleming Building, Room 105: 1 mile west of I-17 on Camelback Rd., North on 33rd Ave., Second building on the right.



### Cherry Rd. Star Parties



Take I-17 north to the Cherry Rd exit. Turn west (left) and continue on Cherry Rd for about 5 miles. Turn Left on the dirt road just past the sign that says Cherry 6. Note you turn in the direction Opposite the arrow on the sign. The site is 1/2 mile in through a fence on your right. Please close the gate behind you and make sure it remains closed at all times

## Such A Deal



8'0" Astro dome with 32" slide shutter with 4 vertical and 4 horizontal casters. Steel ring plate, four keepers holding horizontal casters. Can help move with trailer will also sale trailer for \$200.00 firm. Call to see dome June 8th sat. # 480-515-4339 bids will start at \$800.00 in cash. Please leave your name and phone number to confirm that your coming. We will open at 10AM for you.

Raul Espinosa

## SAC Membership Services

**Membership**– Memberships are for the calendar year and are pro-rated for new members as follows: Jan– Mar: 100%; Apr– Jun: 75%; Jul-Sep: 50%; Oct-Dec; 25%.

- \$28.00 Individual Membership
- \$42.00 Family Membership
- \$14.00 Newsletter Membership
- \$ 7.00 Nametag for members  
(will be mailed to address below)

### Magazine Subscription Services

The following magazines are available at a discount to club members. Check the magazines you wish to subscribe to or renew, and pay the club treasurer. Please allow 3-4 months for the order to be processed.

- Sky & Telescope \$30.00/yr
- Astronomy \$29.00/yr

Please Print

Make Check Payable to : SAC

Name: \_\_\_\_\_

Bring completed form to a meeting or mail it with your remittance to:

Address: \_\_\_\_\_

City: \_\_\_\_\_ St: \_\_\_\_\_ Zip: \_\_\_\_\_

SAC Treasurer  
c/o Paul Dickson  
7714 N 36th Ave  
Phoenix, AZ 85051-6401

Phone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

### Sac on the Internet

SAC has several E-mail mailing lists. If you check the boxes below, the E-mail address above will be subscribed to that list.

- SAC-Announce@freelists.org:** SAC-Announce is a mailing list for just club announcements, Typically 3-5 messages per month.
- SAC-Forum@freelists.org:** SAC-Forum is a general discussion mailing list. Topics should be related to Astronomy or SAC
- SAC-Board@freelists.org:** SAC-Board is a mailing list for discussions of club business. If you'd like to see how the club is run (or not run), or have a question about the club, this is the list to read. Typically month to month matters are discussed.
- AZ-Observing@freelists.org:** AZ-Observing while not a Sac list, is well attended by SAC members. This is the list to with observing places around Arizona. Find out where people are going and what they saw.

### E-mailed Newsletter

Sac can save a lot of money if you download the PDF version of the newsletter. PDF files are readable by both PC's and Macs. When the newsletter is published, a message will be sent to the address indicated above with the URL of the newsletter. Check the box below if you don't have access to the internet or if you prefer a printed copy.

- Please send me a hard Copy of the newsletter

# SAGUARO ASTRONOMY CLUB

March 2002

5643 W. Pontiac Dr  
Glendale, AZ 85308-9117

Phone: 623-572-0713  
Fax: 623-572-8575  
Email: Saguaro Astro@aol.com



Videmus Stellae



## SAC Schedule of Events 2002

REVISED

### SAC Meetings

Jan. 25th, 2002	July 26th 2002
Feb. 22nd 2002	Aug. 23rd 2002
Mar. 29th 2002	Sep. 20th 2002
Apr. 26th 2002	Oct. 18th 2002
<b>May 17th 2002</b>	Nov. 15th 2002
June 21st 2002	Dec. 20th 2002 (Holiday Party)

### SAC Star Parties

Date	Sunset	Astronomical Twilight Ends	Moonrise
Jan 5th	1737	1906	0049
Feb 2nd	1803	1929	2346
Mar 2nd	1829	1951	2238
Apr 6th	1856	2021	0355
May 4th	1917	2050	0230
June 1st	1937	2118	0102
July 6th	1945	2127	0258
Aug 3rd	1930	2104	0132
Aug 31st	1858	2024	0009
Sep 28th	1820	1942	2250
Oct 26th	1745	1909	2136
Nov 30th	1723	1851	0410
Dec 28th	1731	1900	0305

### Deep Sky Group Meetings

Feb. 28th 2002	Aug. 29th 2002
May 2nd, 2002	Oct. 24th 2002
June 27th, 2002	Dec. 26th 2002